UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,544	04/06/2000	Atsushi Uchino	Q58637	7510

7590 08/16/2004	EXAMINER
Sughrue Mion Zinn Macpeak & Seas PLLC	RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2665	

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DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02 July 2004_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,4-9 and 13-17_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,2,4-9,13-15 and 17_ is/are rejected.

7)☐ Claim(s) _16_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, see Response, filed 7/2/2004, with respect to claim 16 have been

fully considered and are persuasive. The rejection of claim 16 has been withdrawn.

2.   Applicant's arguments filed 7/2/2004 have been fully considered but they are not

persuasive. On pages 10-11, with regards to claims 1, 2, 5-9, 15, and 17, Applicant argues that

"Dinkin fails to disclose that any sort of 'routing' information is listed in a packet that is received

by the host (i.e. IN 126), and that the host sends a broadcast packet to the other domain (i.e. Sub-

Area Section 104) listed in the routing information". In a similar vein, Applicant further argues

that "Dinkin merely discloses that the PPN section 202 of the Interface Node 120 (i.e. the IN 126

of Fig. 1), maintains a directory of all network nodes in the PPN network 102, and consults the

directory when a broadcast search is received. Applicant submits that the consultation of a

directory fails to disclose the receipt of a routing information 'packet'". Examiner agrees that

Dinkin does not expressly disclose that the host acquires a packet which includes routing

information of a network, and as such, the host does not send a broadcast packet to the other

domains listed in the routing information received in a packet since it is not explicitly disclosed

that routing information is received in a packet. This is why Examiner combined Dinkin with

Arrowood. In response to applicant's arguments against the references individually, one cannot

show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re

Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Examiner maintains that the

combination of Dinkin and Arrowood discloses that a packet containing routing information is

received by the host and used to direct further resource searches. Therefore, Examiner maintains

that the rejection is proper.

3.   Applicant further argues, on pages 11-12, that Arrowood fails to cure the deficiencies of

Dinkin since "Arrowood discloses that the network nodes can maintain their own topology

database (col. 3, lines 47-48). As stated above, Dinkin utilizes the teachings of Arrowood in

regard to the PPN network 102. However, Dinkin fails to disclose that routing information of

domains other than the alleged first domain...are acquired by the Interface Node IN 126".

Examiner, respectfully, disagrees. The Examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the claimed

invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art.

See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347,

21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Arrowood teaches sending packets containing

routing information to the nodes in the network in order to ensure that the routing information is

updated. Thus, the combination of Dinkin and Arrowood suggest that the second network would

exchange routing packets between nodes on the network, including the Interface Node, in order

to update the routing information in the nodes to reflect any changes to the network. As such,

Examiner maintains that the combination of Dinkin and Arrowood suggests the limitations of the

claims, as outlined in the rejection below.

4.   Applicant additionally traverses Examiner's statements of Official Notice. Examiner will

elaborate on these arguments below.

5.   On pages 14-16, Applicant argues, with respect to claims 4, 13, and 14, that the portion

of Dinkin cited by Examiner "fails to teach or suggest an address or network number of each

domain or an address of each domain" since the cited portion deals with "a directory of the

network nodes in the alleged first domain". Examiner agrees, however, other portions of Dinkin,

which Examiner cited for other claims, do disclose that the Interface Node contains a directory of

the network nodes in other domains (i.e. col. 7, lines 52-58 and col. 8, line 37-col. 9, line 21).

Since Applicant was aware of these passages in Dinkin, Examiner maintains that Dinkin renders

the claims obvious.

6.   Applicant additionally traverses Examiner's statements of Official Notice. Examiner will

elaborate on these arguments below.

7.   In the above arguments, Applicant traverses Examiner's statements of Official Notice.

Specifically, Applicant traverses Examiner's statement of Official Notice that implementing a

method in software is very well known and that a network number and router address are well

known pieces of routing information. Examiner notes that these statements of Official Notice

were included in the Final Rejection of 10/27/2003 (see sections 17 and 28). If Applicant does

not traverse the Examiner's assertion of official notice or Applicant's traverse is not adequate,

then the common knowledge or well-known in the art statement is taken to be admitted prior art

because Applicant failed to traverse the Examiner's assertion of official notice or that the

traverse was inadequate (see MPEP §2144.03(c)). Since Applicant did not previously traverse

these statements of Official Notice, Applicant has already implicitly admitted these statements as

prior art. However, since Examiner did not make statements affirming this admission, Examiner

will now provide evidence for the statements of Official Notice. In support of the statements of

Official Notice regarding software, Examiner submits Daniel et al. (USPN 5,726,985) see col. 4,

lines 34-42 and Haartsen (USPN 5,909,433) see col. 1, lines 57-67. In support of the statements

of Official Notice regarding routing information, Examiner submits Hashimoto (USPN

5,815,668) see Fig. 6 and col. 3, lines 43-54.

8.   Examiner urges Applicant to amend the claims in order to incorporate further limitations

which will distinguish the claims from the cited prior art. For instance, one aspect of Applicant's

invention is directed to setting a client device to search for nodes in a network where the domain

of the client device is connected to other domains using a router (page 11, line 8-page 13, line 1,

esp. page 12, line 25-page 13, line 1). In this case, the client device requires routing information

to be sent to it from the router since the client device will not have routing information already

stored. In the cited prior art, the host is interpreted to be the router interconnecting the domains

where the router receives packets of routing information in order to update the router's routing

tables. Here, the router uses the routing information already stored in the router to perform the

broadcast searches. Examiner notes that the client devices (end nodes) of the prior art may not

perform the search themselves since the client devices may not contain routing information.

Thus, by amending the claims to limit the host to a client device, Applicant may be able to

overcome the prior art.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   Claims 1, 2, 5-9, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Dinkin et al (USPN 5,224,205) in view of Arrowood et al (USPN 4,827,411).

11.   Regarding claims 1, 5, and 7, Dinkin discloses a node-search method and device in a

network, comprising: a host (network interface means) of a first domain (ref. 102: PPN network)

(col. 5, lines 9-11); the host, sending a broadcast packet, for requesting a response from a node

which provides a specific service, to at least any one of said plurality of domains other than the

first domain which is listed in routing information (col. 2, line 51-col. 3, line 3; col. 3, lines 24-

32; col. 6, line 54-col. 8, line 37; and col. 8, line 53-col. 9, line 21) where if a resource is not

found with a limited search, then the interface node initiates broadcast searches of other

domains; and receiving a response packet for said broadcast packet and detecting the node which

sent the response packet (col. 6, line 54-col. 8, line 37). Dinkin does not expressly disclose that

the host of a first domain acquires a packet which includes routing information of a network

configured with a plurality of domains including, the first domain connected to at least one

interworking unit (network node); however, Dinkin does disclose that the interface node uses

routing information to perform the search (col. 7, lines 4-12). Dinkin also discloses that the

network is configured with a plurality of domains including the first domain connected to at least

one interworking unit (network node) (col. 2, line 51-col. 3, line 3; col. 3, lines 24-32; col. 6, line

54-col. 8, line 37; and col. 8, line 53-col. 9, line 21). Dinkin further discloses that the topology

and resources are maintained in a distributed database as is described in Arrowood (col. 4, lines

51-57). Arrowood discloses that a node of a first domain acquires a packet which includes

routing information of a network in order to keep the database updated (col. 3, line 63-col. 4, line

7 and col. 5, line 40-col. 6, line 10). It would have been obvious to one of ordinary skill in the art

at the time of the invention to have the host of a first domain acquire a packet which includes
routing information of a network configured with a plurality of domains including, the first
domain connected to at least one interworking unit in order to keep the routing database updated.
Dinkin in view of Arrowood does not expressly disclose that the process is implemented by a
program in a computer-readable storage medium; however, Examiner takes official notice that
implementing a method in software is very well known.

12.   Regarding claims 2, 6, and 8, Dinkin discloses a node-search method and device in a
network, the method comprising the steps of and the device comprising means for: sending a
broadcast packet, for requesting a response from a node that provides a specific service, from
said host (interface node) of a first domain to a domain which is listed in routing information
(col. 2, line 51-col. 3, line 3; col. 3, lines 24-32; col. 6, line 54-col. 8, line 37; and col. 8, line 53-
col. 9, line 21); and receiving, in said host, a response packet in response to said broadcast
packet, and detecting the node which sent the response packet (col. 6, line 54-col. 8, line 37).
Dinkin does not expressly disclose sending a packet, for requesting routing information from the
network which is connected to an interworking unit (network node), from a host to the
interworking unit, where the interworking unit is capable of storing routing information set in
advance and where the network is configured with a plurality of domains including the first
domain or receiving, in said host, a packet containing said routing information; however, Dinkin
does disclose that the interface node uses routing information to perform the search (col. 7, lines
4-12). Dinkin also discloses that the network is configured with a plurality of domains including
the first domain connected to at least one interworking unit (network node) (col. 2, line 51-col. 3,
line 3; col. 3, lines 24-32; col. 6, line 54-col. 8, line 37; and col. 8, line 53-col. 9, line 21). Dinkin

further discloses that the topology and resources are maintained in a distributed database as is

described in Arrowood (col. 4, lines 51-57). Arrowood discloses that a node of a first domain

acquires a packet which includes routing information of a network in order to keep the database

updated (col. 3, line 63-col. 4, line 7 and col. 5, line 40-col. 6, line 10). As broadly defined, each

interface node sends a packet that requests routing information when it sends its own updates

since each update allows other nodes to recognize the position and active status of the sending

node (col. 9, lines 25-38) where, if the node does not send an update, the node and all links

connecting the node to other nodes will be deleted from the topology lists of the other nodes. It

would have been obvious to one of ordinary skill in the art at the time of the invention to send a

packet, for requesting routing information from the network which is connected to an

interworking unit (network node), from a host to the interworking unit, where the interworking

unit is capable of storing routing information set in advance and where the network is configured

with a plurality of domains including the first domain and to receive, in said host, a packet

containing said routing information in order to keep the routing database updated. Dinkin in view

of Arrowood does not expressly disclose that the process is implemented by a program in a

computer-readable storage medium; however, Examiner takes official notice that implementing a

method in software is very well known.

13.   Regarding claim 9, referring to claim 8, Dinkin in view of Arrowood discloses that the

interworking unit is a router (Arrowood: col. 1, lines 14-20) where a device that routes messages

and selects routes is taken to be a router.

14.   Regarding claim 15, referring to claim 1, Dinkin in view of Arrowood discloses that a

plurality of interworking units exist in the network, wherein at least one of said plurality of

interworking units is a bridge, a brouter, or a router (Dinkin: Fig. 1 and col. 5, lines 9-11 and

Arrowood: col. 1, lines 14-20) where a device that routes messages and selects routes is taken to

be a router.

15.   Regarding claim 17, referring to claim 15, Dinkin in view of Arrowood suggests first

sending the broadcast packet to at least one of said plurality of domains with a hop count less

than a specified number (Dinkin: col. 2, line 51-col. 3, line 3; col. 3, lines 24-32; col. 6, line 54-

col. 8, line 37, esp. col. 7, lines 48-51; and col. 8, line 53-col. 9, line 21) where Dinkin discloses

sending the broadcast message to nodes that are only a single hop count away.

16.   Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkin et

al (USPN 5,224,205) in view of France et al (USPN 5,754,790).

17.   Regarding claims 4 and 13, Dinkin discloses a node-search method in a network,

comprising the steps of: acquiring information indicating a network number and an address of a

router of each domain in the network (col. 7, lines 4-12), where Examiner takes official notice

that network numbers and address of each router are well known pieces of routing information;

and broadcasting, based on said acquired information, into a specific network so as to search for

a node (col. 2, line 51-col. 3, line 3; col. 3, lines 24-32; col. 6, line 54-col. 8, line 37; and col. 8,

line 53-col. 9, line 21). Dinkin does not disclose that the routing information is received using an

RIP packet. France teaches that using RIP packets is a well-known method to distribute routing

information (col. 1, line 14-col. 2, line 30). It would have been obvious to one of ordinary skill in

the art at the time of the invention to use RIP packets to distribute the routing information since

RIP packets are well known in the art. Dinkin in view of France does not expressly disclose

broadcasting to a specific domain using a specific port number; however, Examiner takes official

notice that it is well known in the art to use specific port numbers to broadcast to a specific

domain since each network domain is connected to the internetworking unit via a specific port.

Dinkin in view of France does not expressly disclose that the process is implemented by a

program in a computer-readable storage medium; however, Examiner takes official notice that

implementing a method in software is very well known.

18.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkin et al

(USPN 5,224,205) in view of Ahearn et al (USPN 5,926,463).

19.   Regarding claim 14, Dinkin discloses a process of acquiring information indicating a

network number and an address of a router of each domain of said plurality of domains (col. 7,

lines 4-12), where Examiner takes official notice that a network number and router address are

well known pieces of routing information; a process of broadcasting into at least any one of said

plurality of domains other than the first domain, based on said acquired information so as to

search for a node (col. 2, line 51-col. 3, line 3; col. 3, lines 24-32; col. 6, line 54-col. 8, line 37,

esp. col. 7, lines 48-51; and col. 8, line 53-col. 9, line 21). Dinkin does not expressly disclose that

the routing information is acquired by receiving an SNMP (Simple Network Management

Protocol) packet from at least one router of a network configured with a plurality of domains

including the first domain. It is also well known in the art to use packets to allow interface nodes,

such as routers, to update their network maps using SNMP packets in order to have the maps

accurately reflect any changes in the network, as is evidenced by Ahearn (col. 12, lines 3-9). It

would have been obvious to one of ordinary skill in the art at the time of the invention to receive

an SNMP packet which includes routing information in which a domain in the network is listed

in order to ensure that all interface nodes have an accurate map of the networks which the

interface nodes are connecting. Dinkin in view of Ahearn does not expressly disclose

broadcasting to a specific domain using a specific port number; however, Examiner takes official

notice that it is well known in the art to use specific port numbers to broadcast to a specific

domain since each network domain is connected to the internetworking unit via a specific port.

Dinkin in view of France possibly does not expressly disclose that the process is implemented by

a program in a computer-readable storage medium; however, Examiner takes official notice that

implementing a method in software is very well known.

Allowable Subject Matter

20.   Claim 16 objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims. The prior art does not disclose or fairly suggest sending the first

broadcast to the domain with the fewest hop counts. Rather the prior art discloses that the

broadcast is sent sequentially to all the domains until the resource is found.

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Baratz et al (USPN 4,914,571) see entire document which is relied upon heavily by

Dinkin which also discloses that any node can initiate a search (col. 2, lines 28-37) and that a

node acquires routing information through searches, where a search would necessitate sending a

request for information (col. 5, lines 17-45, esp. col. 7, lines 31-34).

22.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The

examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
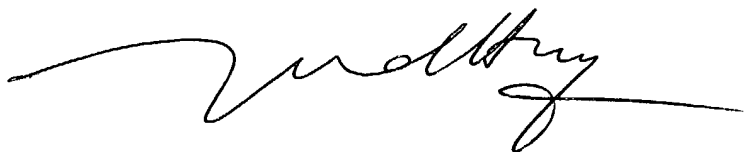Examiner
Art Unit 2665

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